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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/696,462  | 10/25/2000  | Marlon B. Roa-Diaz   | 100.134US01         | 4031             |
| 34206   | 7590        | 12/28/2004           | EXAMINER            |                  |
| FOGG AND ASSOCIATES, LLC<br>P.O. BOX 581339<br>MINNEAPOLIS, MN 55458-1339 |             |                      | ELALLAM, AHMED      |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2662                |                  |

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/696,462

Applicant(s)

ROA-DIAZ, MARLON B.

Examiner

AHMED ELALLAM

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 20-234 is/are allowed.
- 6) ☒ Claim(s) 14-19 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/9/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This is responsive to amendment filed on August 9, 2004. the amendment has been entered.

Claims 1-39 are pending. In which claims 14-19, 35-37 are rejected and claims 1-13, 20-34, 38 and 39 are allowed.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 14, it is not clear what is meant by the phrase "when a virtual connection changes to at least one of several signal conditions, switching to the protection route for that virtual connection; and when the virtual connection changes to at least one other than the at least one of several signal conditions staying with the working route". More specifically, the meaning of the "changes to at least one of several signal conditions" is vague. More specifically, dependent claim 15 and 16 specify the conditions as being signal failure, signal degradation and ring fault, and that cast a doubt to what else is meant by "several signal conditions" other than the one specified in claims 15 and 16

In claim 17, in addition to the above rejection with reference to base claim 14, it is not clear what is meant by "selecting the at least one of several signal conditions". More

specifically, it is not clear why such selection is taken place, because in the base claim, it is already recited that the virtual connection is already switched to the protection route or stayed with the working route. It seems that a missing step is lacking from claim 17.

Regarding claim 18, claim 18 has the same selection criteria as in the parent claim 17, and in addition, it is not clear why such selection of a signal degradation, signal loss, or ring fault is taken place.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14-19 and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Uphadya et al. (US 5,949,755).

Regarding claim 14, with reference to figure 2 and 4, Uphadya discloses, a working ring 110, a protection ring 120 for ATM cells transport, and a plurality of nodes A through D, each node is capable of detecting a loss of header error check synchronization (claimed tracking a status of first and second routes for each virtual connection in the ring network) and generating a protection payload data unit, which is egresses to the plurality of nodes and the protection PDU notifies other nodes . Uphadya also discloses that if a failure occurs at the working ring, the network controller directs the switch to egress the ATM cells to the protection ring as shown in Fig. 7, see column 7, lines 9-56. (Claimed when a virtual connection changes to at least one of

several conditions, switching to the protection route for that virtual connection). Further Uphadya discloses if HEC SYNC is restored, the CPU 200 directs the data path multiplexer to switch the VCs so that the node receives ATM cells from the working ring. See column 6, lines 60-67 and column 7, lines 1-18. (Claimed when the virtual connection changes to at least one other than the at least none of several signal conditions, staying with the working route).

Regarding claim 15, Uphadya discloses, in Fig. 6 and 9, identifying a set of virtual connections by a network element that detected the error to determine a set of virtual connections that are affected by the detected error; and tracking a state of the first and second routes for each virtual connection. See column 5, lines 34-56. (Claimed monitoring cells injected in a virtual connection due to at least one of a signal failure, and a signal degradation).

Regarding claim 16, with reference to figure 11, Uphadya shows a fiber cut that is monitored for protection switching of virtual connections. See column 7, lines 19-29.

Regarding claim 17, Uphadya disclose the monitoring of the HEC SYNC, and if the there is an error, protection is then provided. Further more, Uphadya discloses protecting ATM traffic against synchronous optical fiber cuts or other types of transmission media failures in a network..." see Uphadya column 3, line 34-36. Examiner interpreted the "other types of transmission media failures" which is the cause for the HEC error as being the claimed "selecting the at least one of several signal conditions".

Regarding claim 18, with reference to figure 11, Uphadya shows a fiber cut that is monitored for protection switching of virtual connections. See column 7, lines 19-29. (Claimed selecting one of signal degradation, signal loss, and ring fault)

Regarding claim 19, with reference to figure 2 and 4, Uphadya discloses, a working ring 110, a protection ring 120 for ATM cells transport, and a plurality of nodes A through D, each node repeatedly performs header error check synchronization (HEC SYNC) to determine whether there has been a loss of HEC SYNC (claimed selecting at least one of several signal conditions to trigger protection switching), and that each node is capable of detecting a loss of header error check synchronization (claimed tracking a status of first and second routes for each virtual connection in the ring network) and generating a protection payload data unit. Which is egresses to the plurality of nodes and the protection PDU notifies other nodes, Uphadya also discloses that if a failure occurs at the working ring, the network controller directs the switch to egress the ATM cells to the protection ring as shown in Fig. 7, see column 7, lines 9-56. (Claimed when a condition of a virtual connection changes to at least one of several selectable selected conditions, switching to the protection route for that virtual connection). Further Uphadya discloses if HEC SYNC is restored, the CPU 200 directs the data path multiplexer to switch the VCs so that the node receives ATM cells from the working ring. See column 6, lines 60-67 and column 7, lines 1-18. (Claimed when a condition of a virtual connection changes to at least one of several selectable signal conditions, staying with the working route).

Regarding claim 35, with reference to figure 2 and 4, Uphadya discloses, a working ring 110, a protection ring 120 for ATM cells transport, and a plurality of nodes A through D, each node is capable of detecting a loss of header error check synchronization (claimed tracking a condition of first and second routes for each virtual connection in the ring network) and generating a protection payload data unit. which is egresses to the plurality of nodes and the protection PDU notifies other nodes . Uphadya also discloses that if a failure occurs at the working ring, the network controller directs the switch to egress the ATM cells to the protection ring as shown in Fig. 7, see column 7, lines 9-56. (Claimed when a condition of a virtual connection changes to at least one of several selectable signal conditions, switching to the protection route for that virtual connection). Further Uphadya discloses if HEC SYNC is restored, the CPU 200 directs the data path multiplexer to switch the VCs so that the node receives ATM cells from the working ring. See column 6, lines 60-67 and column 7, lines 1-18. (Claimed when the condition of the working route returns to an acceptable level, returning to the working route for the virtual connection).

Regarding claim 36, Uphadya discloses, with reference to Fig. 6 and 9, a identifying a set of virtual connections comprises looking in a table of a network element that detected the error to determine a set of virtual connections that are affected by the detected error; and tracking a state of the first and second routes for each virtual connection. See column 5, lines 34-56; column 8, lines 49-51. (Claimed tracking the condition of the first and second route comprises monitoring the virtual connections for error cells).

Regarding claim 37, with reference to figure 11, Uphadya shows a fiber cut that is monitored for protection switching of virtual connections. See column 7, lines 19-29.

### ***Response to Arguments***

3. Applicant's arguments filed August 9, 2004 have been fully considered but they are not persuasive.

The previous rejections of claims under 112 2<sup>nd</sup> Paragraph are withdrawn, however the Amendment to claims 14-18 raised new issues as indicated above. Please refer to the new 112 2<sup>nd</sup> Paragraph rejection above.

The objection to claim 18 is withdrawn in view of the Amendment.

### ***Claim Rejections - 35 USC § 102:***

Claim 14, 19 and 35:

Applicant argues in page 15 of the Remarks that "*Uphadya does not teach when a virtual connection changes to at least one of several signal conditions, switching to the protection route for that virtual connection.*" Furthermore, Uphadya does not teach or suggest when the virtual connection changes to at least one other than the at least one of several signal conditions, staying with the working route." (Italics added).

Examiner respectfully disagrees, Examiner interpreted the teaching of Uphadya of having the ability of directing the switch to egress the ATM cells to the protection ring upon a failure in the working ring (Fig. 7, see column 7, lines 9-56) as well as the restoration of ATM traffic back to the working ring (after restoration of the HEC SYNC),



as being the claimed limitations of claim 14. More specifically, the detection of a fault in the working ring reads on the claimed *"a virtual connection changes to at least one of several signal conditions, switching to the protection route for that virtual connection"*, and, the restoration of the HEC that trigger the switching to the working path (route) reads on the claimed *"the virtual connection changes to at least one other than the at least one of several signal conditions, staying with the working route"*. Examiner believes that claim 14 does not have novelty over the teaching of Uphadya, given the broadest reasonable interpretation of the claim limitations, and since Uphadya teaches the presence for both the working and the protection route and switching over the protection route in case of fault, and getting back to the working route upon restoration, Examiner believes that claim 14 is anticipated by Uphadya.

**Claim 15:**

Regarding claim 15, Applicant argues on page 16, first paragraph, that *"Uphadya does not teach or suggest monitoring cells injected in a virtual connection due to at least one of signal failure, and signal degradation," ... Uphadya does not teach signal conditions such as signal failure and signal degradation"*. (Italics added). Examiner respectfully disagree, Examiner interpreted the received cells in error (according to the HEC Synch) for the protection switching as being the claimed limitation of claim 15, because the cells of Uphadya that are in error were injected by one of the node, therefore they read on the insertion of "error cells", since they belong to the same virtual connection. Examiner reassert that the given the broadest interpretation of the claim limitation, Uphadya anticipates claim 15. It is to be noted that

Applicant may be interpreting the claim in light of the specification, however, the claim as amended does not distinguish over Uphadya 's teaching.

**Claim 18:**

Regarding claim 18, Applicant argues on page 16, second paragraph, that *"Uphadya does not teach the method of claim 18. In particular, Uphadya does not teach the selecting of the at least one selected condition comprises selecting at least one of signal degradation, signal loss, and ring fault"*. (Italics added). Examiner respectfully disagrees. Examiner interpreted the fiber cut of *Uphadya* as being the triggering factor for the protection switching, which satisfy the claimed at least one selected signal condition is ring fault.

**Claim 19:**

Regarding claim 19, Applicant argues on page 17, that *"Uphadya does not teach selecting at least one of several signal conditions to trigger protection switching."* Furthermore, *Uphadya does not teach when a condition of a virtual connection changes to at least one of several selectable signal conditions, switching to the protection route for that virtual connection."* (Italics added).

Examiner respectfully disagrees, In addition to the argument related to claim above, Uphadya teaches the monitoring of the HEC SYNC, and if there is an error, protection is then provided. Further more, Uphadya discloses protecting ATM traffic against synchronous optical **fiber cuts or other types of transmission media failures** in a network..." see Uphadya column 3, line 34-36. That is to say "fiber cuts or other types of transmission media failures" causes the cells to be in error and hence trigger

the protection switching of Uphadya's HEC based protection switching. Therefore, Examiner assert that Uphadya discloses; *when a condition of a virtual connection changes to at least one of several selectable signal conditions, switching to the protection route for that virtual connection*".

**Claim 35:**

For similar reasons, Examiner reasserts that Uphadya anticipates claim 35 for similar reasons as argued above with relation to claim 14 and 19.

Examiner believes, that given the invention as described in the specification, and the broadest reasonable interpretation of claim limitations, that the rejection above is proper.

**Conclusion**

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou Hassan can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHMED ELALLAM  
Examiner  
Art Unit 2662  
December 21, 2004

  
**JOHN PEZZLO**  
**PRIMARY EXAMINER**